

Felder and Rogenhofer¹ describe the male of this species, and also give a figure of the female.

A male from the Volcan de Atitlan is shown on our Plate.

6. **Ophthalmophora asopis**, sp. n. (Tab. L. figg. 19, ♂ ; 20, ♀.)

Male. Closely allied to *O. limboguttata* (Feld. & Rogenh.), from which it differs in its larger size, and also in the following particulars:—The dark patches are not irrorated with white, the ocellus on the secondaries is much more distinct, and the yellow band crossing the primaries is much wider and of a brighter yellow. Expanse, ♂ $1\frac{1}{6}$, ♀ $1\frac{1}{4}$ inch.

Hab. PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

The dark brown patches on the wings and its larger size sufficiently distinguish *O. asopis* from *O. limboguttata*; the differences between the females of the two species will be best understood by a comparison of the figures. *O. limboguttata* seems to be restricted to Mexico and Guatemala, and *O. asopis* to Chiriqui; we have received a good series of each of them.

7. **Ophthalmophora aspledon**, sp. n. (Tab. L. fig. 22, ♀.)

Female. Primaries dark yellowish-brown, the costal margin, apex, and outer margin, and also a spot at the anal angle, orange-yellow, an indistinct metallic line crossing the wing near the apex; secondaries orange-yellow, thickly irrorated with dark brown scales, the base dark brown, the darker colour being edged on the outer side with a line of golden scales, a submarginal row of minute metallic spots extending from the apex to the anal angle, and a small black ocellus close to the apex; the underside pale yellow, the apex and outer margin of the primaries shaded with brown; the fringe orange-yellow: head, thorax, and antennæ yellowish-brown; the abdomen orange-yellow above, pale yellow beneath; legs pale yellow. Expanse 1 inch.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

One specimen. Allied to *O. limboguttata* (Feld. & Rogenh.).

8. **Ophthalmophora amabilis**.

Phalæna amabilis, Cram. Pap. Exot. ii. p. 24, t. 112. fig. G¹.

Opisthoxia amabilaria, Hübn. Verz. bek. Schmett. p. 308².

Ophthalmophora amabiliata, Guen. Sp. gén. des Lép. ix. p. 399³.

Ophthalmophora amabilis, Walk. Cat. xxii. p. 615⁴; Butl. Ent. Monthly Mag. xviii. p. 61⁵.

Hab. MEXICO, Omealca near Orizaba, Cuesta de Misantla (*M. Trujillo*), Atoyac in Vera Cruz (*Schumann*), Coatepec (*coll. Schaus*); NICARAGUA, Chontales (*Belt*); PANAMA, Chiriqui (*Arcé, in mus. D.*; *Ribbe, in mus. Staudinger*), Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet (*Champion*). — GUIANA, Surinam^{1 3 4 5}; AMAZONS, Pará^{4 5}.

A common insect at Coatepec, according to Mr. Schaus. We have received a good series of it from the Volcan de Chiriqui. Mexican specimens are generally paler than those from more southern localities.

9. **Ophthalmophora bella.** (Tab. L. fig. 23.)

Ophthalmophora bella, Butl. Ent. Monthly Mag. xviii. p. 60¹.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*), Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

In some specimens of this species the inner margin of the primaries is broadly pure white, in others it is clouded with reddish-brown scales; the black markings on the underside are also variable, and sometimes almost wanting. The type was formerly in the Norris collection, and the locality quoted by Mr. Butler¹ is "Limas."

10. **Ophthalmophora molpadia**, sp. n. (Tab. L. fig. 24, ♀.)

Female. Primaries and secondaries reddish-brown; the primaries partly crossed from the inner margin by a pale yellow band edged on the inner side with white, the band extending along the inner margin almost to the base, a small yellow streak about the middle of the costal margin, the fringe dark brown; the secondaries crossed near the base by a silvery-white line, the apex and part of the outer margin edged with yellow, the ocellus and metallic spots very much as in *O. amabilis* (Cram.); the underside white, the outer margin of the primaries broadly bordered with brown. Expanse 1½ inch.

Hab. PANAMA, Chiriqui (*mus. Staudinger*).

One specimen

BYSSODES.

Byssodes, Guenée, Sp. gén. des Lép. ix. p. 399 (1857); Walker, Cat. xxii. p. 617.

Phrygionis, Hübner, Verz. bek. Schmett. p. 307 (1816) (partim).

This genus, like *Ophthalmophora*, is peculiar to Tropical America.

1. **Byssodes privignaria.**

Byssodes privignaria, Guen. Sp. gén. des Lép. ix. p. 401 (♂)¹; Walk. Cat. xxii. p. 618².

? *Phalæna decorata*, Fabr. Ent. Syst. iii. 2, p. 173³.

Hab. MEXICO, Atoyac in Vera Cruz (*Schumann*), Coatepec (*coll. Schaus*); GUATEMALA, in the city (*Rodriguez*), San Gerónimo, Volcan de Atitlan 2500 to 3500 feet (*Champion*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—COLOMBIA; TRINIDAD; ANTILLES, Jamaica³, Martinique^{1 2}.

This species is closely allied to *B. polita* (Cram.), from which it differs in having a red spot on the outer margin of the secondaries.

2. **Byssodes appropriata.** (Tab. L. fig. 25, ♂.)

Byssodes appropriata, Walk. Cat. xxii. p. 619 (♂)¹.

Hab. MEXICO¹, Coatepec (*coll. Schaus*); GUATEMALA, Tamahu in Vera Paz (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*), Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Mr. Champion captured a very large series of this species on the slope of the Volcan de Chiriqui. Our figure is taken from one of these specimens.

3. *Byssodes miletia*, sp. n. (Tab. L. fig. 27, ♂.)

Male. Primaries and secondaries dove-colour; the primaries with a small or indistinct white spot at the base, and crossed from the costal to the inner margin by two white bands—the first narrow and towards the base, the second very wide and slightly beyond the middle,—the fringe greyish-white; the secondaries partly crossed from the costal margin to near the anal angle by a wide white band, which becomes narrower behind, the anal angle clouded with orange-yellow, the outer margin partly white and with two black spots near the anal angle; the underside with the bands as above, but less distinctly marked, and the orange-yellow on the secondaries wanting: head, thorax, abdomen, legs, and antennæ pale dove-colour. The female very similar to the male, but with the white bands slightly wider; the secondaries with a narrow submarginal metallic line extending from the anal angle almost to the apex, and the outer margin from the apex to the anal angle pale yellow; the underside whiter. Expanse, ♂ $1\frac{1}{2}$, ♀ $1\frac{3}{4}$ inch.

Hab. MEXICO, Jalapa (*F. D. G.*), Coatepec (*coll. Schaus*), Cuesta de Misantla (*M. Trujillo*); GUATEMALA, San Gerónimo (*Champion*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*).

The five specimens of this species before me, one female and four males, do not show any variation, except the slight difference between the sexes. Our description and figure of the male are taken from the example captured by Mr. Godman at Jalapa.

4. *Byssodes saturniaria*.

Urapteryx saturniaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 63, 83, fig. 414¹; Guen. Sp. gén. des Lép. ix. p. 33²; Walk. Cat. xx. p. 9³; Snell. Tijdschr. voor Ent. xvii. p. 11⁴.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*), Volcan de Chiriqui 3000 to 4000 feet (*Champion*).—COLOMBIA⁴; VENEZUELA^{1 2 3}.

The two specimens received from our region are both females, agreeing well with the male figured by Herrich-Schäffer.

5. *Byssodes nævia*, sp. n. (Tab. L. fig. 26, ♂.)

Male. Primaries and secondaries white; the primaries crossed from the costal to the inner margin by five yellowish-fawn-coloured lines, the first four being streaked with metallic silvery scales (more distinctly so in some specimens than in others), the marginal line and fringe pale fawn-colour; the secondaries crossed beyond the middle by a single fawn-coloured line, the veins near the inner margin shaded with yellowish-fawn-colour, the anal angle broadly clouded with yellow and with two oblique metallic golden streaks extending inwards, two small greyish-black spots at the angle of the outer margin, the fringe yellowish; the underside pure white: head, thorax, abdomen, and legs white, the antennæ pale brown. The female very similar to the male. Expanse, ♂ ♀, $1\frac{3}{4}$ inch.

Hab. MEXICO, Cordova (*Rümelin*), Jalapa (*M. Trujillo*), Coatepec (*coll. Schaus*); GUATEMALA, Coban (*Champion*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This species is allied to *Urapteryx quadriflata*, Feld. & Rogenh., = *Micronia metargyria*, Walk. (Journ. Linn. Soc., Zool. ix. p. 198). We have received a very large series of specimens of *B. nævia* from Chiriqui, which do not show any variation.

6. **Byssodes nazada**, sp. n. (Tab. L. fig. 28, ♀.)

Female. Primaries and secondaries pure white; the primaries crossed from the costal to the inner margin by six greyish bands, these bands edged on either side with a darker line, the second and third bands wider than the others, the sixth very narrow and not reaching the inner margin, the marginal line grey, the fringe white; the secondaries partly crossed about the middle by two yellowish-grey lines, and with a submarginal grey band edged with black on the outer side extending from the apex almost to the anal angle, the outer margin and the anal angle shaded with yellow, a faint metallic line extending from the inner margin partly round the wing, and a black spot on the outer margin; the underside pure white, the secondaries slightly clouded with grey round the outer margin: head, thorax, abdomen, antennæ, and legs greyish-white. Expanse 2 inches.

Hab. MEXICO, Las Vigas (*coll. Schaus*).

One specimen.

PITYEJA.

Pityeja, Walker, Cat. xxiii. p. 828 (1861).

1. **Pityeja histrionaria**.

Urapteryx histrionaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 63, 78, figg. 71, 72¹; Snell. Tijdschr. voor Ent. xvii. p. 11².

Pityeja histrionaria, Walk. Cat. xxvi. p. 1625³.

Pityeja bellaria, Walk. Cat. xxiii. p. 829⁴.

Hab. GUATEMALA, Purula (*Champion*); COSTA RICA (*Van Patten, in mus. D.*); PANAMA, Chiriqui (*Ribbe*).—COLOMBIA², Antioquia; VENEZUELA^{1 4}.

The six specimens of this species before me show considerable variation in the colour of the secondaries, from almost white to deep orange. The females are more highly coloured than the males. A single example only has been received from Guatemala.

CHRYSOCESTIS.

Chrysocestis, Hübner, Verz. bek. Schmett. p. 307 (1816); Walker, Cat. xxii. p. 619.

1. **Chrysocestis fimbriaria**.

Phalæna Geometra fimbriaria, Cram. Pap. Exot. iv. p. 112, t. 348. fig. C¹.

Chrysocestis fimbriaria, Walk. Cat. xxii. p. 620².

Palyas imperata, Guen. Sp. gén. des Lép. ix. p. 396³.

Chrysocestis pæcilmidia, Butl. Trans. Ent. Soc. Lond. 1881, p. 332⁴.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Gerónimo, Cubilguitz, San Joaquin, and Cahabon in Vera Paz, Las Mercedes 3000 feet (*Champion*); HONDURAS (*Dyson*²; *Whitely, in mus. D.*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Arcé, in mus. D.*; *Ribbe, in mus. Staudinger*), Panama city (*J. J. Walker*).—ECUADOR; GUIANA, Essequibo River, Surinam^{1 2 3}; AMAZONS⁴, Pará²; BRAZIL², Rio Janeiro.

Cramer's figure of *C. fimbriaria* (t. 348. fig. C) shows only one row of submarginal

silvery spots, not two, as stated by Mr. Butler⁴ when he described *C. pœcilmidia* as a distinct species. The series of over eighty specimens before me vary very slightly in the width of the outer margin.

Subfam. *GONIACIDALIINÆ*.

This subfamily was proposed by Dr. Packard [Report of the U.S. Geol. Survey of the Territ. x. p. 311 (1876)] to include three genera, *Goniacidalia*, Pack., *Calledapteryx*, Grote, and *Callizzia*, Pack., each containing a single species from the United States or Canada. One species of *Calledapteryx* has been described by Mr. H. Edwards as from Mexico; it is quite unknown to me.

ALLEDAPTERYX.

Calledapteryx, Grote, Trans. Am. Ent. Soc. ii. p. 119 (1868); Packard, in Report of the U.S. Geol. Survey of the Territ. x. p. 313, t. 3. fig. 14 (neurulation) (1876).

1. Calledapteryx opinaterata.

Calledapteryx opinaterata, H. Edwards, Papilio, iv. p. 18¹.

Hab. MEXICO, State of Vera Cruz (*Schaus*¹).

Subfam. *EPHYRINÆ*.

EPHYRA.

Ephyra, Duponchel, Hist. Nat. Léop. iv. 2, p. 108 (1829); Guenée, Sp. gén. des Léop. ix. p. 405; Walker, Cat. xxii. p. 624.

This genus is represented in nearly all parts of the world; five species occur within our limits.

1. Ephyra punctaria.

Phalæna Geometra punctaria, Stoll, in Cramer's Pap. Exot. v. p. 58, t. 12. f. 10¹.

Ephyra fartaria, Guen. Sp. gén. des Léop. ix. p. 406²; Walk. Cat. xxii. p. 634³.

Hab. MEXICO, Coatepec (*Brooks*), Jalapa (*coll. Schaus*), Atoyac in Vera Cruz (*Schumann*); GUATEMALA, Zapote (*Champion*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*). —GUIANA, Surinam^{1 3}; BRAZIL^{2 3}.

Not uncommon in Central America. It varies in colour and in the distinctness of the markings: in some specimens the spots are black and well defined; in others they are almost obsolete.

2. Ephyra megista, sp. n. (Tab. LI. fig. 1, ♂.)

Male. Primaries and secondaries reddish-fawn-colour, each crossed by two rows of very minute black spots,

and with a black marginal line, the fringe reddish-brown, a small greyish spot edged with black at the end of the cell on the secondaries; the underside pale pinkish-fawn-colour, without markings: head, thorax, and abdomen reddish-brown, the antennæ and legs pale fawn-colour.—*Female* very similar to the male, but considerably paler in colour. Expanse 1 inch.

Hab. GUATEMALA, Volcan de Atitlan 2500 to 3500 feet, Las Mercedes 3000 feet, Panajachel 5000 feet (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 3500 feet (*Champion*).

This small species is allied to *E. punctata* (Stoll). Our figure is taken from a Guatemalan specimen.

3. *Ephyra citrina*, sp. n. (Tab. LI. fig. 2, ♀.)

Female. Primaries and secondaries pale citron-yellow; the primaries crossed from the costal to the inner margin by three waved narrow brown lines—the first near the base, the second beyond the middle, the third submarginal,—and with a large greyish-white spot edged with brown at the end of the cell (more distinct in some specimens than in others), the marginal line yellowish-brown, the fringe yellow; the secondaries crossed beyond the middle from the costal to the inner margin by two waved narrow brown lines, and with a large greyish-white spot at the end of the cell (very similar to that on the primaries), the marginal line yellowish-brown, the fringe yellow; the underside pale yellow, with the lines and spots very faintly marked: head, thorax, abdomen, and legs pale yellow (antennæ wanting). Expanse $1\frac{1}{2}$ inch.

Hab. MEXICO, San Blas (*J. J. Walker*), Paso de San Juan in Vera Cruz (*coll. Schaus*), Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Volcan de Irazu 6000 feet (*Rogers*).

The single specimen from Costa Rica (without abdomen) is much smaller than the others; it is probably a male of the same species. Our description and figure are taken from the San Blas example.

4. *Ephyra conspicillaria*.

Zonosoma conspicillaria, Snell. Tijdschr. voor Ent. xvii. p. 45, t. 3. fig. 7¹.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*); GUATEMALA, San Gerónimo (*Champion*); COSTA RICA, San Francisco 4500 feet (*Rogers*); PANAMA, Volcan de Chiriqui (*Ribbe, in mus. Staudinger*).—COLOMBIA¹.

The specimens before me agree well with Snellen's figure.

5. *Ephyra olivaria*.

Zonosoma olivaria, Snell. Tijdschr. voor Ent. xvii. p. 46, t. 3. fig. 8¹.

Hab. MEXICO, Teapa (*H. H. Smith*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*).—COLOMBIA¹.

Two specimens, a male and female, are all I have seen of this species from our region.

ANISODES.

Anisodes, Guenée, Sp. gén. des Lép. ix. p. 415 (1857); Walker, Cat. xxii. p. 639.

Guenée included a large number of species in *Anisodes*, chiefly from South America,

Borneo, and Ceylon, and numerous others have since been added by Walker, Felder, Butler, &c. In our region it is represented by nine species, three of which are described as new. This genus is exceedingly close to *Ephyra*.

1. *Anisodes globaria*.

Anisodes globaria, Guen. Sp. gén. des Léop. ix. p. 417¹; Walk. Cat. xxii. p. 642²; Butl. Trans. Ent. Soc. Lond. 1881, p. 334³.

Hab. MEXICO, Jalapa (*Höge, M. Trujillo*); GUATEMALA, Las Mercedes 3000 feet (*Champion*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*), Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—COLOMBIA^{1 2}; AMAZONS³; BRAZIL².

We have received a good series of specimens of this species. It varies greatly in colour and size.

2. *Anisodes binocellaria*?

Zonosoma binocellaria, Herr.-Schäff. Samml. aussereur. Schmett. p. 61, fig. 351¹.

Hab. MEXICO, Las Vigas (*coll. Schaus*); COSTA RICA (*Van Patten*).—VENEZUELA¹.

Zonosoma binocellaria, Herr.-Schäff., is probably quite distinct from *A. globaria*, Guen., with which Walker associates it. Two specimens, one from Mexico and one from Costa Rica, both females in very poor condition, are all I have seen of it from within our limits.

3. *Anisodes roseigera*.

Epione (?) *roseigera*, Walk. Cat. xxvi. p. 1496¹.

Hab. COSTA RICA, Volcan de Irazu 6000 feet (*Rogers*).—BRAZIL¹.

One specimen, a female, almost identical with Walker's type in the National Museum.

4. *Anisodes lateritiaria*.

Zonosoma lateritiaria, Herr.-Schäff. Samml. aussereur. Schmett. p. 61, fig. 332¹; Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 406².

Anisodes lateritiaria, Guen. Sp. gén. des Léop. ix. p. 418³; Walk. Cat. xxii. p. 642⁴; Butl. Trans. Ent. Soc. Lond. 1881, p. 333⁵.

Hab. MEXICO, Coatepec, Jalapa (*coll. Schaus*).—VENEZUELA^{1 3 4}; GUIANA, Paramaribo²; AMAZONS⁵.

Three males of this very distinct species are contained in Mr. Schaus's collection.

5. *Anisodes prunellaria*.

Zonosoma prunellaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 61, 81, fig. 329¹.

Anisodes prunellaria, Guen. Sp. gén. des Léop. ix. p. 420²; Walk. Cat. xxii. p. 642³.

Hab. GUATEMALA, Zapote (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000

feet (*Rogers*); PANAMA, Volcan de Chiriqui 2000 to 3200 feet (*Champion*).—VENEZUELA^{1 2 3}.

Amongst the six specimens received, one only is a male, this being very similar to Herrich-Schäffer's figure. The females are paler in colour.

6. **Anisodes melitia**, sp. n. (Tab. LI. fig. 3, ♀.)

Female. Primaries and secondaries very pale fawn-colour; the primaries with the costal margin greenish-grey, irrorated with darker scales, a small greyish spot at the end of the cell, a straight greyish-green line extending from the inner to the outer margin, and a submarginal row of very minute black dots extending from the costal margin near the apex to the inner margin; the secondaries crossed close to the base by a greenish-grey line, and with a small grey spot at the end of the cell and a submarginal row of small black spots extending from the costal to the inner margin; the marginal line of both wings black, the fringe pale fawn-colour; the underside much paler than above and almost without markings: head, thorax, abdomen, antennæ, and legs pale fawn-colour. Expanse $1\frac{1}{2}$ inch.

Hab. GUATEMALA, Cerro Zunil 4000 feet, Pantaleon 1700 feet (*Champion*).

Two specimens, both females.

7. **Anisodes caletra**, sp. n. (Tab. LI. fig. 4, ♂.)

Male. Primaries and secondaries brownish-fawn-colour slightly irrorated with black scales, each with a small grey dot edged with black at the end of the cell and a submarginal row of small black spots, the marginal line with black points, the fringe brownish-fawn-colour; the underside pale whitish-fawn-colour, with some black dots: head, thorax, abdomen, and legs brownish-fawn-colour, the antennæ brown. The female paler in colour, and not quite so much spotted with black. Expanse $1\frac{1}{4}$ inch.

Hab. MEXICO, Jalapa (*coll. Schaus*); GUATEMALA, Zapote (*Champion*); PANAMA, Chiriqui (*Ribbe, in mus. Staudinger*).

Our description and figure are taken from a Zapote specimen.

8. **Anisodes carbina**, sp. n. (Tab. LI. fig. 5, ♂.)

Male. Primaries and secondaries fawn-colour; the primaries crossed by a row of small black dots, and with a black spot at the end of the cell, and two others nearer the base of the wing, the marginal line with black points, the fringe fawn-colour; the secondaries with a rather large black spot at the end of the cell, below which the wing is crossed from the costal to the inner margin by a row of small black dots; the underside as above, but paler in colour: head, thorax, abdomen, and legs fawn-colour, the antennæ brown.—*Female* similar to the male, but rather paler, and with the row of dots crossing the wings more distinct. Expanse $1\frac{1}{4}$ inch.

Hab. PANAMA, Bugaba 800 to 1500 feet (*Champion*), Chiriqui (*Ribbe, in mus. Staudinger*).

Allied to *A. caletra*.

9. **Anisodes importaria**.

Anisodes importaria, Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 407, t. 17. fig. 17¹.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).—GUIANA, Paramaribo¹.

One specimen, from Chiriqui, very similar to Möschler's figure.

Subfam. *ACIDALIINÆ*.

ASELLODES.

Asellodes, Guenée, Sp. gén. des Lép. ix. p. 424 (1857) ; Walker, Cat. xxii. p. 654.

The two species included by Guenée in this genus extend northwards into our region. *Ephyra admirabilis*, Oberth., also belongs here.

1. ***Asellodes laternaria*.** (Tab. LI. fig. 8, ♀.)

Asellodes laternaria, Guen. Sp. gén. des Lép. ix. p. 425, Phalén. t. 21. f. 3 (♂)¹; Walk. Cat. xxii. p. 654².

Hab. PANAMA (*Ribbe, in mus. Staudinger*).—BRAZIL^{1 2}.

One specimen from Panama, which I believe to be the female of Guenée's species.

2. ***Asellodes fenestraria*.**

Asellodes fenestraria, Guen. Sp. gén. des Lép. ix. p. 425¹; Walk. Cat. xxii. p. 655².

Hab. PANAMA, Caldera in Chiriqui 1200 feet, David (*Champion*), Chiriqui (*Ribbe, in mus. Staudinger*).—COLOMBIA (?)^{1 2}; ECUADOR.

3. ***Asellodes admirabilis*.**

Ephyra admirabilis, Oberth. Études d'Ent. vii. p. 33, t. 2. f. 10¹.

Hab. MEXICO, Paso de San Juan in Vera Cruz (*coll. Schaus*).—ECUADOR; PERU, Huambo¹.

TRYGODES.

Trygodes, Guenée, Sp. gén. des Lép. ix. p. 426 (1857) ; Walker, Cat. xxii. p. 655.

Two out of the three species referred to this genus by Guenée extend northwards into Central America, whence numerous others are now added.

1. ***Trygodes herbiferata*.**

Trygodes herbiferata, Guen. Sp. gén. des Lép. ix. p. 426, Phalén. t. 15. f. 4 (♂)¹; Walk. Cat. xxii. p. 655².

Hab. PANAMA, Bugaba 800 to 1000 feet, Volcan de Chiriqui 2000 feet (*Champion*).—BRAZIL^{1 2}.

Two males from Chiriqui, agreeing well with Guenée's figure.

2. ***Trygodes musivaria*.** (Tab. LI. figg. 6, 7, ♂.)

Geometra musivaria, Herr.-Schäff. Samml. aussereur. Schmett. pp. 62, 82, f. 340 (♀)¹.

Trygodes musivaria, Guen. Sp. gén. des Lép. ix. p. 426²; Walk. Cat. xxii. p. 656³.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).—BRAZIL^{1 2 3}.

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This species is quite distinct from *T. herbiferata*, Guen. Our figure is taken from a fine male specimen in Dr. Staudinger's collection.

3. *Trygodes niobe*, sp. n. (Tab. LI. figg. 9, 10, ♂.)

Male. Primaries and secondaries brownish-fawn-colour; the primaries with a large green patch on the inner margin close to the base, extending across the wing nearly to the costal margin, but not reaching it, a wide green streak at the end of the cell and a second streak just beyond it—the two forming a broad V-shaped mark not touching the costal margin,—and two greyish-brown waved lines crossing from the costal to the inner margin—the first beyond the cell, the second submarginal,—the green markings edged with a very fine black line, the anal angle and the middle of the outer margin clouded with greyish-brown, the marginal line black, the fringe pale brown; the secondaries irrorated with black dots at the base and along the inner margin, and with five green spots edged with black about the middle, partly in and partly below the cell, beyond which are two small black spots, two waved greyish-brown lines corresponding to those on the primaries crossing the wing from the costal to the inner margin, the marginal line black, the fringe pale brown; the underside pale fawn-colour, that of the primaries with a pinkish tinge, the waved lines as above but much more distinct, two black marks at the end of the cell on the primaries corresponding with the green one above: head, thorax, and abdomen pale fawn-colour, the underside of the latter and the legs considerably paler, the antennæ pale brown. Expanse 2 inches.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Two males. Allied to *T. musivaria*, from which it may be at once distinguished by the differently coloured underside.

4. *Trygodes merta*, sp. n. (Tab. LI. fig. 11, ♂.)

Male. Primaries and secondaries pale greyish-fawn-colour, almost semihyaline, the outer margin of both wings broadly bordered with darker colour; the primaries with a narrow band of small green spots crossing from the end of the cell to the inner margin, beyond which is an indistinct waved line extending from the costal to the inner margin; the secondaries crossed about the middle by a band of small green spots, beyond which is an indistinct waved line extending from the costal to the inner margin; the fringe pale greyish-fawn-colour; the underside considerably paler than above, both wings with a wide submarginal broken black band and a black marginal line: head, antennæ, thorax, abdomen, and legs pale fawn-colour, the abdomen paler beneath.—*Female* slightly darker, and with the green spots much smaller and not so bright in colour. Expanse, ♂ ♀, $1\frac{4}{10}$ inch.

Hab. MEXICO, Rinconada and Paso de San Juan in Vera Cruz (*coll. Schaus*); GUATEMALA, Pantaleon 1700 feet, Volcan de Atitlan 2500 to 3500 feet (*Champion*).—ECUADOR; PERU.

Allied to *T. physciata*, Feld. & Rogenh., from which it may be readily distinguished by the band of green spots crossing the wings. Our description and figure are taken from a Guatemalan specimen.

5. *Trygodes spoliataria*.

Trygodes spoliataria, Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 407, t. 17. f. 18¹.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).—GUIANA, Surinam¹.

One male from Chiriqui, only differing from Möschler's figure in being a little paler in colour.

6. *Trygodes ategua*, sp. n. (Tab. LI. fig. 12, ♂.)

Male. Primaries and secondaries semihyaline pale greyish-brown, thickly irrorated with minute brown scales; the primaries crossed near the base from the costal to the inner margin by a zigzag brown line, and with a second brown line beyond it, extending from the apex to the middle of the inner margin, where it almost joins the first, the wing between the two lines and along the outer margin brownish, a small brown spot at the end of the cell, the marginal line dark brown, the fringe greyish-brown; the secondaries crossed by two waved brown lines—the first before the middle, the second submarginal,—and with a small brown spot at the end of the cell, the outer margin shaded with pale greyish-brown; the underside very much as above, with the darker markings showing through: head and collar pale yellow, the thorax, abdomen, and legs pale greyish-brown, the antennæ pale brown.—*Female* with the markings much more indistinct. Expanse, ♂ ♀, $1\frac{6}{10}$ inch.

Hab. MEXICO, Coatepec (*coll. Schaus*); GUATEMALA, in the city (*Rodriguez*), Las Mercedes, San Isidro, Pantaleon, San Gerónimo (*Champion*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*), Bugaba 800 to 1500 feet (*Champion*).

Mr. Champion obtained a large number of specimens of this species in Guatemala, which do not show any variation; from Mexico we have only seen a female in Mr. Schaus's collection. A male from San Isidro is figured.

7. *Trygodes melia*, sp. n. (Tab. LI. fig. 13, ♂.)

Male. Primaries and secondaries pale yellowish-grey, slightly hyaline, thickly irrorated with pale brown scales; the primaries crossed from the costal to the inner margin by two waved narrow brown lines—the first nearest the base, the second submarginal,—the outer margin clouded with brown, a small brown spot at the end of the cell; the secondaries crossed about the middle from the costal to the inner margin by a faint waved brown line; the underside paler than above, but with the apex more shaded with brown: head yellow, the thorax and abdomen pale greyish-brown, the antennæ dark brown, the legs yellowish-brown.—*Female* very similar to the male. Expanse $1\frac{3}{4}$ inch.

Hab. MEXICO, Coatepec, Jalapa (*coll. Schaus*); GUATEMALA, Panajachel 5000 feet (*Champion*).

Our description and figure are taken from a Guatemalan specimen.

8. *Trygodes callas*, sp. n. (Tab. LI. fig. 14, ♂.)

Male. Primaries and secondaries very pale brown, thickly irrorated with ochraceous scales; the primaries crossed from the costal to the inner margin by two faint waved brown lines—the first nearest the base, the second beyond the cell,—and with an indistinct brown spot at the end of the cell; the secondaries crossed from the costal to the inner margin by two waved lines—the first below the middle, the second submarginal; the marginal line of both wings dark brown and the fringe pale brown; the underside as above, but with all the lines much more distinct: head yellow in front, the thorax, tegulæ, abdomen, legs, and antennæ pale brown.—*Female* very similar to the male, but larger. Expanse, ♂ $1\frac{7}{10}$, ♀ 2 inches.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Allied to, and possibly a southern form of, *T. melia*, from which it differs considerably in colour. Two examples.

9. *Trygodes carbania*, sp. n. (Tab. LI. fig. 15, ♂.)

Male. Primaries pale brown, thickly irrorated from the base to beyond the middle with reddish-brown scales,

three small streaks on the costal margin, a spot at the end of the cell, and two small spots close to the apex creamy-white; secondaries pale yellowish-fawn-colour, thickly irrorated on the inner margin at the anal angle and partly round the outer margin with brown and reddish-brown scales; the fringe pale brown; the underside as above, but paler in colour: head in front and the antennæ reddish-brown, the thorax, abdomen, and legs pale brown. Expanse $1\frac{3}{4}$ inch.

Hab. GUATEMALA, Totonicapam 10,000 feet (*Champion*).

One male.

10. **Trygodes (?) auxesia**, sp. n. (Tab. LI. figg. 16, ♂; 17, ♀.)

Male. Primaries and secondaries semihyaline grey, thickly irrorated with ochraceous scales; the primaries crossed from the costal to the inner margin by two narrow darker lines—the first near the base, the second beyond the cell—these lines edged on the inner side with yellowish-white scales, a black dot at the end of the cell; the secondaries crossed about the middle by a narrow brown line; the fringe yellowish-grey: head pale yellow, the thorax and abdomen greyish-brown, the antennæ pale brown.—*Female* very similar to the male, but more hyaline. Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{3}{10}$ inch.

Hab. MEXICO, Jalapa (*M. Trujillo*), Coatepec (*coll. Schaus*); GUATEMALA, Las Mercedes, Cerro Zunil, Panajachel, Volcan de Atitlan, San Gerónimo (*Champion*).

Apparently a common insect at Jalapa and also in Guatemala. It varies in colour from pale grey to pale yellowish-brown. We figure a pair from Guatemala.

EOIS.

Eois, Hübner, Verz. bek. Schmett. p. 308 (1816) (pars).

Hyria, Stephens, Syst. Cat. Brit. Ins., Haust. p. 150 (1829); Guenée, Sp. gén. des Lép. ix. p. 428; Walker, Cat. xxii. p. 658.

The name *Hyria* is usually adopted for this genus, though it is preoccupied in Mollusca (Lamarck, 1819).

1. **Eois pyraustaria?**

Hyria pyraustaria, Guen. Sp. gén. des Lép. ix. p. 429¹; Walk. Cat. xxii. p. 660²; Butl. Trans. Ent. Soc. Lond. 1881, p. 336³.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—AMAZONS³; BRAZIL^{1 2}.

Two rather worn examples from Chiriqui seem to belong to this species.

2. **Eois subtectata.** (Tab. LI. figg. 18, ♂; 19, ♀.)

Hyria (?) subtectata, Walk. Cat. xxii. p. 662 (♀)¹.

Hab. GUATEMALA, San Gerónimo, San Isidro (*Champion*).—COLOMBIA, Bogota¹.

The male differs from the female in being without the yellow band on the secondaries. Walker's type is now in the Oxford Museum.

3. **Eois carnaria.**

Arrhostia carnaria, Herr.-Schäff. Samml. aussereur. Schmett. p. 61, fig. 194¹.

Acidalia carnaria, Herr.-Schäff. loc. cit. p. 80².

Hyria (?) *carnaria*, Guen. Sp. gén. des Lép. ix. p. 431³; Walk. Cat. xxii. p. 662⁴.

Hab. PANAMA, Chiriqui (*Ribbe*, in *mus. Staudinger*), Obispo (*Salvin*, *mus. D.*).—
GUIANA, Surinam^{1 3 4}.

In the Panama specimens the yellow marginal lines are not so distinct as in Herrich-Schäffer's figure.

4. **Eois ascantia**, sp. n. (Tab. LI. fig. 20, ♀.)

Female. Primaries and secondaries brownish-yellow shaded with pink, their outer margins broadly bordered with dark reddish-brown; the primaries with two small hyaline spots at the end of the cell, beyond which is a rather large reddish-orange square spot, the secondaries with a hyaline streak at the end of the cell, the fringe pale yellow; the underside uniformly pale brownish-yellow: head, antennæ, thorax, and abdomen reddish-brown, the legs brown. Expanse $\frac{3}{4}$ inch.

Hab. GUATEMALA, Teleman in Vera Paz (*Champion*).

One specimen. Allied to *E. carnaria* and *E. subtectata*.

5. **Eois batea**, sp. n. (Tab. LI. fig. 21, ♂.)

Male. Primaries pale brown, streaked near the apex and along the inner margin with fine yellow lines, a small black dot at the end of the cell; secondaries pale brown, with the base and a rather wide band crossing from the costal margin near the apex to the inner margin slightly above the anal angle yellow, crossed by fine reddish-brown lines, a rather large black dot at the end of the cell; the fringe alternately brown and yellow; the underside much paler than above: head, thorax, and abdomen yellowish-brown, the antennæ brown, the legs pale brown. Expanse $\frac{3}{4}$ inch.

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*).

One specimen.

6. **Eois camma**, sp. n. (Tab. LI. fig. 22, ♀.)

Male. Primaries and secondaries uniform reddish-brown, with the fringe yellowish-brown; the underside much paler than above: head, antennæ, thorax, and abdomen reddish-brown. Expanse $\frac{7}{10}$ inch.

Hab. GUATEMALA, Pantaleon 1700 feet (*Champion*).

One specimen.

7. **Eois triangularia**.

Hyria triangularia, Guen. Sp. gén. des Lép. ix. p. 429¹; Walk. Cat. xxii. p. 661².

Hab. MEXICO, Jalapa (*Höge*).—BRAZIL^{1 2}.

One specimen, identical with others from Rio Janeiro in my own collection.

8. **Eois fagenaria**.

Hyria fagenaria, Guen. Sp. gén. des Lép. ix. p. 430¹; Walk. Cat. xxii. p. 661².

Hab. GUATEMALA, San Gerónimo (*Champion*).—BRAZIL^{1 2}.

Two specimens, both females.

9. **Eois nundina**, sp. n. (Tab. LI. figg. 23, ♂; 24, ♀.)

Male. Primaries yellow, crossed from the costal to the inner margin by reddish-brown lines, and also with metallic lead-coloured lines, a small black dot at the end of the cell, the fringe yellow; secondaries pale yellow, crossed by metallic lead-coloured lines, the base reddish-brown, a submarginal pale brownish band extending from the costal margin to the anal angle, the fringe yellow; the underside much paler than above and entirely without the lead-coloured lines: head, thorax, and the basal part of the abdomen reddish-brown, the rest of the latter pale yellow; the antennæ pale brown, the legs yellowish-brown. —*Female* usually more strongly marked. Expanse, ♂ $\frac{3}{4}$, ♀ $\frac{9}{10}$ inch.

Hab. MEXICO, Jalapa (*coll. Schaus*); GUATEMALA, Senahu in Vera Paz (*Champion*); COSTA RICA, Volcan de Irazu 6000 feet (*Rogers*).

The Mexican specimen in Mr. Schaus's collection is a female; it is not so strongly marked as either of those figured, the band on the secondaries being very indistinct.

10. **Eois ops**, sp. n. (Tab. LI. figg. 25, ♂; 26, ♀.)

Male. Primaries and secondaries yellow; the primaries crossed near the base from the costal to the inner margin by a number of very fine brown lines, and with a black spot at the end of the cell, beyond which two rather broad reddish-brown bands cross the wing, the brown bands with several very fine lead-coloured lines; the secondaries crossed by two wide reddish-brown bands—the first near the base, the second submarginal,—between which is a row of very indistinct reddish-brown spots, the bands with lead-coloured lines; the fringe pale yellow; the underside very pale yellow, the primaries shaded with pale brown: head, thorax, and abdomen yellow, the antennæ greyish-brown. —*Female* darker in colour and without the lead-coloured lines. Expanse, ♂ $\frac{9}{10}$, ♀ $\frac{3}{4}$ inch.

Hab. MEXICO, Atoyac in Vera Cruz (*Schumann*); GUATEMALA, San Isidro 1600 feet (*Champion*).

Allied to *E. nundina*.

11. **Eois cassandra**, sp. n. (Tab. LI. fig. 27, ♂.)

Male. Primaries and secondaries reddish-fawn-colour, each crossed from the costal to the inner margin by fine waved darker brown lines and with the outer margin broadly edged with bright yellow, the fringe yellow, the primaries with a small black spot at the end of the cell; the underside much paler than above and with the lines more distinct: head, thorax, abdomen, and antennæ reddish-fawn-colour, the underside of the thorax and abdomen and the legs pale greyish-yellow. Expanse 1 inch.

Hab. PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

Allied to *E. ops*, but very distinct in colour and markings.

12. **Eois (?) œno**, sp. n. (Tab. LI. fig. 28, ♀.)

Female. Primaries and secondaries greyish-brown; the primaries shaded with red near the base, and with a double row of small reddish spots extending from the costal margin near the apex to the anal angle and a distinct white spot at the end of the cell, the marginal line dark brown, the fringe yellow; the secondaries crossed near the base by a wide reddish band, below which are two rows of small reddish spots, a distinct white dot at the end of the cell, the marginal line brown, the fringe yellow; the underside pale pinkish-grey, with the white spots as above, both wings with a faint waved brown submarginal line extending from the costal to the inner margin: head, thorax, and abdomen above greyish-brown, much paler beneath, the legs yellowish. Expanse 1 inch.

Hab. MEXICO, Jalapa (*coll. Schaus*).

One rather worn specimen, not showing distinctly the marking near the base of the primaries.

13. **Eois(?) catana**, sp. n. (Tab. LI. fig. 29, ♀.)

Female. Primaries and secondaries very pale greyish-brown, each crossed from the costal to the inner margin by fine waved darker lines, and with a dark brown spot at the end of the cell, the fringe pale yellow; the underside much paler than above. Expanse $1\frac{1}{10}$ inch.

Hab. GUATEMALA, Zapote (*Champion*).

One specimen.

CLETA.

Cleta, Duponchel, Cat. Méthod. des Lép. p. 271 (1884); Guenée, Sp. gén. des Lép. ix. p. 441; Walker, Cat. xxii. p. 678.

1. **Cleta(?) minuta**, sp. n. (Tab. LI. fig. 30, ♂.)

Male. Primaries and secondaries cream-colour, thickly irrorated with brown scales; the primaries crossed from the costal to the inner margin by three dark brown lines—the first close to the base, the second about the middle, the third submarginal,—the outer margin brown, the fringe pale brown; the secondaries crossed by two dark brown lines—the first near the base, the second below the middle,—the fringe cream-colour; the underside very much as above, but paler, with the lines and markings of a redder tint: head and thorax brown, the abdomen brownish-cream-colour irrorated with brown scales, the antennæ dark brown, the legs brownish-cream-colour. Expanse $\frac{7}{10}$ inch.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*).

Our description and figure are taken from a Costa Rican specimen.

CAMBOGIA.

Cambogia, Guenée, Sp. gén. des Lép. ix. p. 431 (1857); Walker, Cat. xxii. p. 668; Snellen, Tijdschr. voor Ent. xvii. p. 47.

Guenée included seven species in this genus, all from Tropical South America; others have since been described by Walker, Felder, Snellen, and Möschler. We are now able to trace several of the species northwards as far as Mexico.

1. **Cambogia heliadaria**.

Cambogia heliadaria, Guen. Sp. gén. des Lép. ix. p. 432¹; Walk. Cat. xxii. p. 668²; Snell. Tijdschr. voor Ent. xvii. p. 47, t. 3. f. 9³.

Acidalia expressaria, Walk. Cat. xxii. p. 742⁴.

Cambogia mexicaria, Walk. Cat. xxv. p. 1618⁵.

Hab. MEXICO, Oaxaca (*Sallé*⁵), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Zapote (*Champion*); HONDURAS (*Dyson*⁴); COSTA RICA, Caché, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Trötsch, in mus. Staudinger*), Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).—COLOMBIA³; GUIANA^{1 2}; BRAZIL^{1 2}.

Varies greatly in the distinctness of the markings.

2. **Cambogia obada**, sp. n. (Tab. LII. figg. 1, ♂; 2, ♀.)

Male. Primaries and secondaries brownish-yellow; the primaries with a wide brown streak extending from the base to the outer margin, this streak divided into two at the end of the cell, and with the costal portion extending to the apex, the wing also crossed from the costal to the inner margin by fine waved brown lines, and with an indistinct submarginal lead-coloured line; the secondaries with a wide brown streak extending from the end of the cell to the outer margin, a dark reddish-brown band crossing near the base, and a series of very fine waved brown lines crossing from the costal to the inner margin; the fringe alternately brown and yellow: head, thorax, abdomen, antennæ, and legs brownish-yellow.—*Female* much paler in colour. Expanse, ♂ ♀, $\frac{3}{4}$ inch.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Allied to *C. heliadarica*.

3. **Cambogia numida**, sp. n. (Tab. LII. fig. 3, ♂.)

Male. Primaries and secondaries pale yellow; the primaries crossed from the base to about the middle by a series of fine waved brown lines, and slightly beyond the middle by a rather wide broken brown band, a large brown spot on the outer margin, the latter marked with very small brown dots; the secondaries crossed by rows of small spots, and with two large square brown spots on the inner margin, and a submarginal brown band; the fringe alternately yellow and brown: head, thorax, abdomen, and legs yellowish-brown, the antennæ brown.—*Female* very similar to the male. Expanse 1 inch.

Hab. MEXICO, Coatepec (*coll. Schaus*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Isidro 1600 feet, San Juan in Vera Paz, Cubilguitz (*Champion*).

Of this species we have received a large series of specimens, which vary considerably in colour, and in the distinctness of the markings. We figure a male from Teapa.

4. **Cambogia russearia**.

Eois russearia, Hübn. Zutr. Samml. exot. Schmett. i. p. 27, figg. 155, 156¹.

Cambogia russearia, Guen. Sp. gén. des Lép. ix. p. 432²; Walk. Cat. xxii. p. 669³; Möschl. Verh. zool.-bot. Ges. Wien, 1881, p. 408⁴.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Cerro Zunil 4000 to 5000 feet, San Isidro 1600 feet (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 3000 feet (*Champion*), Chiriqui (*Ribbe, in mus. Staudinger*).—GUIANA, Surinam^{1 3}, Cayenne^{2 3}, Paramaribo⁴; BRAZIL.

5. **Cambogia tegularia**.

Cambogia tegularia, Guen. Sp. gén. des Lép. ix. p. 433¹; Walk. Cat. xxii. p. 670².

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*), Jalapa (*coll. Schaus*); GUATEMALA, Las Mercedes 3000 feet, Cerro Zunil 4000 to 5000 feet, San Isidro 1600 feet (*Champion*); COSTA RICA, Volcan de Irazu 6000 to 7000 feet (*Rogers*); PANAMA, Chiriqui (*Ribbe*).—BRAZIL^{1 2}, Rio Janeiro.

6. **Cambogia apyraria**.

Cambogia apyraria, Guen. Sp. gén. des Lép. ix. p. 433¹; Walk. Cat. xxii. p. 670²; Snell. Tijdschr. voor Ent. xvii. p. 50³.